309.1 - Charpy V-Notch Test Blocks

These SRMs are test specimens intended primarily for the verification of Charpy V-Notch testing machines in accordance with both ASTM Standard E 23. The dimensions of these SRMs comply with the current ASTM Standard E 23 and the current ISO Standard ISO/DIS 12736. Each SRM unit consists of a set of individual 10 mm × 10 mm × 54 mm steel bars needed to perform one verfication. SRMs 2092 and 2096 are made from 4340 alloy steel; SRM 2098 is made from a high strength maraging steel. SRMs 2092 and 2096 are to be tested at -40° C; SRM 2098 is to be tested at room temperature (21 °C). All SRMs are to be tested in accordance with the testing procedures of the appropriate section of the current ASTM Standard E 23. All SRM specimens should be tested (broken) at the same time, then returned to NIST Boulder for evaluation. An acceptable machine will produce an average value within 1.4 J or 5% of the certified energy value, whichever is greater, provided the specimens appear to have normal markings.

The correct testing temperature is -40 °C ± 1 °C (-40 °F ± 2 °F) when testing low (SRM 2092) ang high (SRM 2096) energy specimens. When testing super-high (SRM 2098) energy specimens, the correct test temperature is 21 °C ± 1 °C (70 °F ± 2 °F).

Instruction guide for installing, maintaining, and verifying your Charpy Impact Machine: Practice Guide.

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PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	Description	Unit of Issue	Energy Range (J)
2092	Low-Energy Charpy	set	13 to 20
2096	High-Energy Charpy	set	88 to 133
2098	Super High-Energy Charpy	set	176 to 244
2115	Low Energy Izod Impact Specimens	set	13 to 25